



International Journal of Sciences: Basic and Applied Research (IJSBAR)

ISSN 2307-4531
(Print & Online)

<http://gssrr.org/index.php?journal=JournalOfBasicAndApplied>



Positive Effect of Lifestyle Management Guide on Hypertension Patients

Muhasidah^{a*}, Ningsih Jaya^b, Alfrida Mallo^c, Mu'tasima AR. M^d, Nuraeni Jalil^e

^{a,b,c,d,e}*Nursing Department of Poltekkes Kemenkes Makassar*

Email: muhasidah@yahoo.co.id

Abstract

Hypertension is a risk factor for various diseases such as stroke and cardiovascular. The purpose of this study is to test the benefits of lifestyle management guidelines to regular treatment, dietary habits and physical exercise of hypertension patient. It was a quasi-experiment, subject divided into 2 groups, that is control and intervention group. Chi Square test used to examine association of lifestyle management as effect of lifestyle management guideline to the increase if knowledge and attitude about hypertension management. Result showed an increase of knowledge and attitude about regular treatment, dietary habits and physical exercise and significantly associated with lifestyle management. Lifestyle management guideline has positive effect to lifestyle management.

Keywords: Hypertension; Life Style; Management Guide.

1. Introduction

Hypertension becomes an emerging problem in developing countries include Indonesia. Case fatality rate increase regarding this diseases and it need hard effort to prevent it [1,2]. Decreasing of blood pressure is modifiable risk factor for stroke and systemic embolism [3,4]. According to WHO (2008), stroke and heart disease is the highest cause of death in the world. Both of these diseases are the development of hypertension disease that is not treated properly.

* Corresponding author.

Regular treatment should be accompanied by appropriate treatment of lifestyle and proper diet against hypertension sufferers to prevent stroke and heart abnormalities [5,6]. Data in Indonesia show that heart disease is the biggest cause of death later following a stroke [7,8]. Hypertension in Makassar, a city in South Sulawesi, Indonesia also experienced an increase in incidence. One such area is the work area of Minasa Upa Community Health Center, in 2012 as many as 1745 people, in 2013 as many as 1821 people and by 2014, 1895 people, then data of end of year 2015 as many as 1955 people. Life style management has been successfully in decrease of blood pressure and no doubt it can be a prevention of hypertension and various chronic diseases but how to deliver this management is still a challenging [9,10]. The purpose of this study is to test the benefits of lifestyle management guidelines to regular treatment, dietary habits and physical.

2. Materials and Methods

This study was quasy experiment, subject divided into 2 groups, that is control and intervention group. Sample size was 30 patients. One of the final objectives of this research is to determine the effectiveness of lifestyle guidance in hypertensive patients to increase knowledge and attitudes of hypertensive patients, resulting in behavioral changes to prevent stroke. Given the data collected and recorded in parametric and nonparametric form, the data will be analyzed quantitatively, using T test, and qualitative statistical tests using mixed method as well as the theory of mixed methods described by John W. Creswell in [13].

Instrument has been validated based on assessment of instruction, content and language, with the following results:

Table 1: Instrument Validation Assessment Aspects and Indicators Participant's Response to Hypertension Patient Guidelines

No.	Aspect of Assessment	Indicator/Criteria of Assessment
1.	Instruction	Clear
2.	Content	Category of response of observed participants expressed clearly The response categories of participants observed contained complete The response categories of participants were well observed
3.	<i>Continued table 1</i> Language	Using of Indonesian language is good and correct Using a language that is easy to understand Using non-inflicting statements multiple interpretations

Expert response also done with the following result:

Table 2: Expert Response to Hypertension Patients Guidelines

No.	Aspects of Assessment	Validator		RT	Interpretation	R
		V1	V2			
1.	The language used is easy to understand	4,00	4,00	4,00	Very valid	100
2.	The term notation used can be understood	4,00	3,00	3,50	Valid	100
3.	Logical Systematic guide framework	4,00	3,00	3,50	Valid	100
4.	Practical easy to use	4,00	3,00	3,50	Valid	100
5.	Interesting	4,00	3,00	3,50	Valid	100
Mean Aspect of Assessment		4,00	3,20	3,60	Very valid	valid
Realibility		0,889				
Mean		6,800				
Standard Deviation		0,600				

3. Results and Discussion

3.1 Results

Education using lifestyle management guide has increased knowledge of hypertension patients and associated significantly with lifestyle management. Data illustrates that the frequency of patients with good knowledge about regular treatment and dietary habits is higher (83.3%) when compared with those with poor knowledge (17.8%). The data also indicate more subjects who have good lifestyle management with dietary habits and sports than regular treatment (Table 4).

Table 3: Association of Patient Knowledge with Lifestyles Management

Knowledge			Lifestyle Management				Total		P-value
			Good		Poor				
			n	%	n	%	n	%	
Regular Treatment			10	40	3	10	13	43,3	0,001*
Dietary habits and Physical Exercise			15	50	2	6,7	17	57,2	
Total			25	86.7	5	17,8	30	100	

*Chi-Square Test

Education using lifestyle management guide also has increased attitude of hypertension patients and associated significantly with lifestyle management. Data illustrates that the frequency of patients with good attitude of regular treatment and dietary habits is higher (83.3%) when compared with those with poor knowledge (17.8%). The data also indicate more subjects who have good lifestyle management with dietary habits and sports than regular treatment (Table 4).

Table 4: Association of Patient Attitude with Lifestyles Management

Attitude	Lifestyle Management				Total		P
	Good		Poor		n	%	
Regular Treatment	9	30	4	17,8	13	43,3	
Dietary habits and physical exercise	17	56,7	0	0	17	50	0,001
Total	26	86,7	4	17,8	30	100	

3.2 Discussions

Management lifestyle guide has been proven increase knowledge and attitude about regular treatment, dietary habits and physical exercise and its significantly associated with lifestyle management of Hypertension patients.

Professionals and academics in health make much guideline in changing lifestyle management both for handling and prevention and this is indeed proven to provide benefits. Besides it is also necessary innovation to keep lifestyle management can be maintained [12,13].

Hypertension is a determinat factor for various chronical disease such as stroke and cardiovascular disease, a guideline will very usefull for hypertension patients. Life style modification is a key factor to manage blood pressure [13,14,15,16].

Dietary habits as low-sodium pattern in daily food is an essential component in hypertension management [17,18].

4. Conclusion

Lifestyle management guide has positive effect on knowledge and attitude and significantly associated with lifestyle management about regular treatment, dietary habits and physical exercise.

Acknowledgement

The authors would like to acknowledge to friends and family for supporting me during this study.

5. Competing Interest

The authors declare that we have no competing interests.

References

- [1] Mills, K. T., Bundy, J. D., Kelly, T. N., Reed, J. E., Kearney, P. M., Reynolds, K., . . . He, J. (2016). Global Disparities of Hypertension Prevalence and Control: A Systematic Analysis of Population-Based Studies From 90 Countries. *Circulation*, 134(6), 441-450. doi:10.1161/circulationaha.115.018912
- [2] Palafox, B., McKee, M., Balabanova, D., AlHabib, K. F., Avezum, A. J., Bahonar, A., . . . Yusuf, S. (2016). Wealth and cardiovascular health: a cross-sectional study of wealth-related inequalities in the awareness, treatment and control of hypertension in high-, middle- and low-income countries. *Int J Equity Health*, 15(1), 199. doi:10.1186/s12939-016-0478-6
- [3] Griffin, G. (2005). Antiplatelet therapy and anticoagulation in patients with hypertension. *Am Fam Physician*, 71(5), 897-899.
- [4] Ishii, M., Ogawa, H., Unoki, T., An, Y., Iguchi, M., Masunaga, N., . . . Akao, M. (2017). Relationship of Hypertension and Systolic Blood Pressure With the Risk of Stroke or Bleeding in Patients With Atrial Fibrillation: The Fushimi AF Registry. *Am J Hypertens*, 30(11), 1073-1082. doi:10.1093/ajh/hpx094
- [5] Kementerian Kesehatan (2015), *Buku Pemanfaatan Status Kesehatan*, Jakarta : BPJS.
- [6] Badan Pusat Statistik Provinsi Sulawesi Selatan. (2013). *Statistik Sosial dan Ekonomi Rumah Tangga . Sulawesi Selatan*.
- [7] He, F. J., Li, J., & Macgregor, G. A. (2013). Effect of longer term modest salt reduction on blood pressure: Cochrane systematic review and meta-analysis of randomised trials. *Bmj*, 346, f1325. doi:10.1136/bmj.f1325
- [8] Yang, M. H., Kang, S. Y., Lee, J. A., Kim, Y. S., Sung, E. J., Lee, K. Y., . . . Lee, S. Y. (2017). The Effect of Lifestyle Changes on Blood Pressure Control among Hypertensive Patients. *Korean J Fam Med*, 38(4), 173-180. doi:10.4082/kjfm.2017.38.4.173
- [9] Riskesdas. (2010). *Laporan Riset Kesehatan Dasar Tahun 2010*. Jakarta
- [10] Pusat Data Dan Informasi Profil Kesehatan Indonesia. (2013). *Health Statistics, Kementerian Kesehatan Republik Indonesia . Jakarta*
- [11] Riyanto, Agus . (3011). *Metodologi Penelitian Kesehatan*, Yogyakarta : Nuha Medika .

- [12] Eckel, R. H., Jakicic, J. M., Ard, J. D., de Jesus, J. M., Houston Miller, N., Hubbard, V. S., . . . Tomaselli, G. F. (2014). 2013 AHA/ACC guideline on lifestyle management to reduce cardiovascular risk: a report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines. *Circulation*, 129(25 Suppl 2), S76-99. doi:10.1161/01.cir.0000437740.48606.d1
- [13] White, N. D., Lenz, T. L., & Smith, K. (2013). Tool guide for lifestyle behavior change in a cardiovascular risk reduction program. *Psychol Res Behav Manag*, 6, 55-63. doi:10.2147/prbm.s40490
- [14] Nicoll, R., & Henein, M. Y. (2010). Hypertension and lifestyle modification: how useful are the guidelines? *Br J Gen Pract*, 60(581), 879-880. doi:10.3399/bjgp10X544014
- [15] Petrella, R. J. (1999). Lifestyle approaches to managing high blood pressure. New Canadian guidelines. *Can Fam Physician*, 45, 1750-1755, 1760-1755.
- [16] suchihashi, T. (2011). [Lifestyle modification in the management of hypertension]. *Nihon Rinsho*, 69(11), 1977-1981.
- [17] Adriouch, S., Lelong, H., Kesse-Guyot, E., Baudry, J., Lampure, A., Galan, P., . . . Fezeu, L. K. (2017). Compliance with Nutritional and Lifestyle Recommendations in 13,000 Patients with a Cardiometabolic Disease from the Nutrinet-Sante Study. *Nutrients*, 9(6). doi:10.3390/nu9060546
- [18] O'Shaughnessy, K. M. (2006). Role of diet in hypertension management. *Curr Hypertens Rep*, 8(4), 292-297.